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10/534,515	05/11/2005	Ingrid Magli-Schmitz	NB/4-22786/A/PCT	5097
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JoAnn Villamizar Ciba Corporation/Patent Department 540 White Plains Road P.O. Box 2005 Tarrytown, NY 10591			EXAMINER NEWPORT, JONATHAN M	
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

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### **DETAILED ACTION**

1. This office action is in response to the applicant's communication filed on 5/11/2005. In virtue of this communication, claims 1-9 are currently presented in the instant application.

#### ***Foreign Priority***

2. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

#### ***Claim Objections***

3. Claims 1 are objected to because of the following informalities:

claim 1, line 1, "comprises" should be changed to --comprises--;

claim 1, line 2, "the desired dyeing" should be changed to --a desired dyeing--;

claim 1, line 3, "that has been drawn up" should be deleted;

claim 1, line 4, "a colour space the colour position" should be changed to --a colour space, a colour position--;

claim 1, line 5, "the dyes" should be changed to --the group of dyes--;

claim 1, line 6, the first instance of "the" should be deleted;

claim 1, line 7, "the dyes in question" should be changed to --the group of dyes--;

Appropriate correction is required.

#### ***Claim Rejections - 35 USC § 112***

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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5. Claim 1 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

6. Regarding claim 1, line 12, the term "optionally" renders the claim indefinite because it is unclear if the claimed invention requires step "f)". Furthermore, claim 1, line 13 recites the phrase "a suitable medium" rendering the claim indefinite because it is not clear what constitutes as suitable medium. See MPEP § 2173.05(d). Appropriate correction is required.

***Claim Rejections - 35 USC § 101***

7. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claim 1 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Claim 1 fails to claim patent eligible subject matter. None of the method steps recited tie to a particular machine nor do any of the steps transform underlying subject matter.

***Claim Rejections - 35 USC § 103***

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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9. Claims 1-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hermann et al. (US Patent No. 5,255,350) in view of Shakespeare et al. (US Patent Application No. 2003/0058441).

With regard to claim 1, Hermann et al. disclose: A method for the production of a digital color catalogue, which comprises:

- a) drawing up a requirement profile (which is equivalent to knowing the dye concentration for dyeing a specific substrate) for the desired dyeing (see Col. 3, lines 64-68 and Col. 4, lines 1-2),
- b) selecting a group of dyes that meet the requirement profile that has been drawn up (see Col. 3, lines 23-25),
- c) determining within a color space the color position of dyes for the desired dyeing (see Col. 4, lines 41-44),
- d) segmenting the color space of the dyes within a depth of shade plane into triangular areas according to shade, wherein the corner points of the triangular areas correspond to the color position (see Fig. 2) of the dyes in question, and the said dyes define a range of shades delimited by the triangular areas (see Col. 4, lines 32-44 and Col. 6, lines 5-13),
- e) dividing the triangular areas within a depth of shade plane arithmetically into a grid (which is equivalent to computer-controlled iteration, see Fig. 3) in such a manner that the points of intersection of the grid are distributed evenly over the triangular areas, where the points of intersection of the grid correspond to a color position (see Col. 4, lines 41-44), and
- f) optionally visualizing the reflectance curves associated with the color positions by means of a suitable medium (which is equivalent to a monitor or an ink-jet printer, see Fig. 3 and Col. 5, lines 1-9).

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Hermann et al. does not disclose a reflectance curve calculated on the basis of a dye recipe.

Shakespeare et al. teaches a reflectance curve (which is equivalent to a total radiance factor) calculated on the basis of a dye recipe (which is equivalent to non-fluorescent dyes, see paragraphs [0066], [0068], [0077], [0078] and [0089]).

Therefore, to modify the method of Hermann et al. by employing the mathematical and computer iterative techniques taught by Shakespeare et al. to calculate the projected dye reflectance curves under arbitrary lighting conditions would have been deemed obvious to a person skilled in the art to mitigate the effects of metamerism (see Hermann et al. [0006] and [0089]).

With regard to claim 2, Hermann et al. discloses a method wherein a computer used to implement steps c), d), e) and f) (see Col. 5, lines 14-17 and Col. 6, lines 26-28).

With regard to claim 3, Hermann et al. discloses a method wherein a computer used to store and manage the data obtained (see Col. 6, lines 38-41).

With regard to claim 4, Hermann et al. discloses a method wherein the  $FTa^*b^*$  color space used as the color space (see Col. 3, lines 20-23 and Col. 4, lines 18-20).

With regard to claim 5, Hermann et al. discloses a method wherein the dyeing is a dyeing on leather or on a textile fiber material (see Col. 5, lines 54-65).

With regard to claim 6, Hermann et al. discloses a method wherein the dyes are disperse dyes, acid dyes, metal complex dyes, reactive dyes, vat dyes, sulfur dyes, direct dyes or pigments, or cationic dyes, natural dyes, developing dyes or food dyes (see Col. 5, lines 34-42).

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With regard to claim 7, Hermann et al. discloses a method wherein a digital color catalogue (which is equivalent to a colour atlas) is obtained (see Col. 4, lines 20-25 and Col. 6, lines 42-44).

With regard to claim 8, Hermann et al. discloses a method for the production of a dyeing on leather or on a textile fiber material which comprises determining the amounts of dyes to employ from a digital color catalogue (see Col. 5, lines 54-65 and Col. 6, lines 40-44)

With regard to claim 8, Hermann et al. discloses a method wherein the desired dyeing is a dyeing on a textile fiber material (see Col. 5, lines 54-65).

***Citation of Relevant Prior Art***

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Prior art Rozzi (US Patent No. 6,654,150) discloses a system for estimating reflectance and transmission spectra of scanned media.

Prior art McDonald et al. (US Patent No. 6,934,026) discloses a method for preparing a dye mixture to produce a target color on a given substrate and illuminated with a given light source.

Prior art Guillemin (WIPO No. WO 93/13398), discloses a method of fractionating a color space to produce a shade chart.

Prior art Shakespeare et al. ("Problems in colour measurement of fluorescent paper grades" Analytica Chimica Acta, Vol. 380, pp. 227-242 (1999), Elsevier Science) discloses further information on calculating reflectance and transmittance curves for fluorescent and non-fluorescent dyes and substrates in arbitrary lighting conditions.

***Inquiry***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JONATHAN M. NEWPORT whose telephone number is (571)270-7553. The examiner can normally be reached on Monday through Thursday, 7:30am-5:00pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thuy V. Tran can be reached on (571)272-1828. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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